

What is claimed is:

1. An automatic program generation apparatus for automatically generating a program that will perform a predetermined processing, comprising:

a plurality of data structure resolution units that respectively include a model program for a corresponding data structure, wherein said model program includes resolution logic for performing a setting peculiar to said predetermined processing; and

a resolution unit for generating a program for performing said predetermined processing by acquiring resolution information relating to said setting peculiar to said predetermined processing for the resolution logic included in said model program in said data structure resolution unit corresponding to a selected data structure and by synthesizing the model program and the resolution information for the resolution logic.

2. The automatic program generation apparatus according to claim 1, wherein said resolution unit comprises means for analyzing said resolution logic included in said model program in said data structure resolution unit corresponding to the selected data structure and for prompting a user to input said resolution information for said resolution logic.

3. The automatic program generation apparatus according to claim 1, wherein the data structure resolution unit corresponding to the selected data structure is either a data structure resolution unit for a simple type data structure, a data structure resolution unit for a slip type data structure, a data structure resolution unit for a hierarchy type data structure, a data structure resolution unit for a tree type data structure, a data structure resolution unit for a stock type data structure, a data structure resolution unit for a time band reservation type data structure, a data structure resolution unit for a plan type data structure, a data structure resolution unit for a seat reservation type data structure, a

data structure resolution unit for a composition type data structures, a data structure resolution unit for a detail-led slip type data structure, a data structure resolution unit for a pedigree type data structure, or a data structure resolution unit for a matrix type data structure.

4. The automatic program generation apparatus according to claim 1, wherein said data structure resolution unit comprises:

a first model program that prescribes a data structure comprising one or a plurality of record types and a link between record types if a plurality of record type exists, and that includes resolution logic for performing a setting for said predetermined processing as to said data structure; and

a second model program that includes resolution logic for performing a setting for said predetermined processing as to an operation, and that corresponds to a basic operation executed for said data structure.

5. A storage medium for storing an automatic program generation program for automatically generating a program that will perform a predetermined processing, said automatic program generation program comprising the steps of:

acquiring resolution information relating to a setting peculiar to said predetermined processing for resolution logic included in a model program in a data structure resolution unit corresponding to a selected data structure, wherein said data structure resolution unit includes said model program for a corresponding data structure, and said model program includes the resolution logic for performing a setting peculiar to said predetermined processing; and

generating a program for performing said predetermined processing by synthesizing the model program and the acquired resolution information for the resolution logic.

6. The storage medium according to claim 5, wherein said automatic program generation program comprises the steps of:

analyzing said resolution logic included in said model program in said data structure resolution unit corresponding to the selected data structure; and

prompting a user to input said resolution information for said resolution logic.

7. An automatic program generation method for automatically generating a program that will perform a predetermined processing, said automatic program generation method comprising the steps of:

acquiring resolution information relating to a setting peculiar to said predetermined processing for a resolution logic included in a model program in a data structure resolution unit corresponding to a selected data structure, wherein said data structure resolution unit includes said model program for a corresponding data structure, and said model program includes the resolution logic for performing a setting peculiar to said predetermined processing; and

generating a program for performing said predetermined processing by synthesizing the model program and the acquired resolution information for the resolution logic.

8. The automatic program generation method according to claim 7, wherein said automatic program generation method comprises the steps of:

analyzing said resolution logic included in said model program in said data structure resolution unit corresponding to the selected data structure; and

prompting a user to input said resolution information for said resolution logic.

9. A storage medium for storing a generation program that is used to generate a program in accordance with a predetermined specification, said generating program comprising:

a first model program that prescribes a data structure comprising one

or a plurality of record types and a link between record types if a plurality of record type exists, and that includes resolution logic for performing a setting in accordance with the predetermined specification for the data structure; and

a second model program that includes resolution logic for performing a setting for an operation in accordance with the predetermined specification, and that corresponds to a basic operation executed for the data structure.

10. The storage medium according to claim 9, wherein said first model program prescribes a simple type data structure comprising one kind of record type, and includes resolution logic for providing an attribute for the record, and wherein resolution logic for providing a setting in accordance with said predetermined specification is embedded in said second model program, and said second model program is to execute at least addition, deletion, update, and search operations for said record.

11. The storage medium according to claim 9, wherein said first model program prescribes a slip type data structure with one kind of header record type, one kind of detail record type, and links for linking said one header record type and one or a plurality of said detail record types, and includes resolution logic for providing attributes for the header record and the detail record, and

wherein said second model program is to execute, for said slip type data structure, at least an operation for creating a new slip and an operation for searching slips, and resolution logic for defining a header record state by relationship with operations and resolution logic for describing settings in accordance with said predetermined specification through a record attribute, a record state, or a combination of said record attribute and said record state are embedded in said second model program.

12. The storage medium according to claim 9, wherein said first model

program prescribes a time band reservation type data structure configured by a resource record type, a reservation record type relating to a resource reservation, a reservation cell record type relating to a reservation time unit, links for linking one resource record type and one or a plurality of reservation record types, and a link for linking one reservation record type and one or a plurality of reservation cell record types, and includes resolution logic for providing an attribute to each record in said time band reservation type data structure, and

wherein said second model program includes resolution logic for providing a setting in accordance with said predetermined specification, and is to execute for said time band reservation type data structure, at least an operation for registering a reservation, an operation for deleting a reservation, an operation for updating a reservation, and an operation for searching reservations.

13. The storage medium according to claim 9, wherein said first model program prescribes a matrix type data structure that includes a row record type, a column record type, a cell record type that represents an intersection of the row and the column, and a column type record type that represents an attribute that can be allocated to each cell, and includes resolution logic for providing attributes to the row record, the column record, and the column type record and resolution logic for allocating the column type record to a cell, and

wherein said second model program includes resolution logic for performing a setting in accordance with said predetermined specification, and is to execute at least an add operation, a change operation, a delete operation, and a search operation for the row record, the column record, and the column type record in said matrix type data structure.

14. The storage medium according to claim 9, wherein said first model program prescribes a detail-led slip type data structure comprising a plurality of kinds of header record types, one kind of detail record type, and links for linking said plurality of kinds of header record types and

said one kind of detail record type, and includes resolution logic for providing an attribute for each record in said detail-led slip type data structure, and

wherein said second model program is to execute for said detail-led slip type data structure, at least an operation for creating a new slip, an operation for searching slips, an operation for deleting a slip, and an operation for changing a slip header type, and resolution logic for defining a header record state by relationship with operations and resolution logic for describing a setting peculiar to said predetermined specification by a record attribute, a record state, or a combination of the record attribute and the record state are embedded in said second model program.

15. The storage medium according to claim 9, wherein said first model program prescribes a stock type data structure comprising a stock record type, a stock reserve details record type for prescribing a stock reserve, an expected incoming stock record type, an expected incoming stock reserve details record type for prescribing a reserve for expected incoming stocks, a link for linking said stock record type and said stock reserve details record type, and a link for linking said expected incoming stock record type and said expected incoming stock reserve details record type, and includes resolution logic for providing an attribute for each record in said stock type data structure, and

wherein said second model program is to execute for each record included in said stock type data structure, at least an add operation, a delete operation, and a search operation, and includes resolution logic for providing a setting in accordance with said predetermined specification.

16. The storage medium according to claim 9, wherein said first model program prescribes a seat reservation type data structure comprising a resource record type, a resource group record type for prescribing a resource group, an opportunity record type for prescribing an opportunity to use the resource group, an occurrence record type for prescribing a

combination of the opportunity and the resource, and a reservation record type relating to one or a plurality of occurrences, and includes resolution logic for providing an attribute for each record in said seat reservation type data structure, and

wherein said second model program is to execute for each record included in said seat reservation type data structure, at least a generation operation, a deletion operation, and a search operation, and includes resolution logic for providing a setting in accordance with said predetermined specification.

17. The storage medium according to claim 9, wherein said first model program prescribes a plan type data structure comprising a plan record type, a time axis record type relating to a time axis, and a time axis hierarchy record type that prescribes a management unit for said time axis, and includes resolution logic for providing an attribute for the plan record, the time axis record, and the time axis hierarchy record and resolution logic for designating a plan management unit, and

wherein said second model program is to execute for each record included in said plan type data structure, at least an addition operation, a deletion operation, and a search operation, and includes resolution logic for providing a setting in accordance with said predetermined specification.

18. The storage medium according to claim 9, wherein said first model program prescribes a composition type data structure comprising a node record type, a node version record type for managing the node version, and a composition record type that represents composition relationship between node version records, and includes resolution logic for providing an attribute for each record included in said composition type data structure, and

wherein said second model program is to execute for each record included in said composition type data structure, at least an addition operation, a deletion operation, a search operation, and resolution logic

for providing a setting in accordance with said predetermined specification is embedded in said second model program.

19. The storage medium according to claim 9, wherein said first model program prescribes a pedigree type data structure comprising one kind of record type to which related information for preserving line continuity is attached, and includes resolution logic for providing an attribute for the record, and

wherein said second model program is to execute for the record, at least an addition operation, a deletion operation, and a search operation, and includes resolution logic for providing a setting in accordance with said predetermined specification.

20. The storage medium according to claim 9, wherein said first model program prescribes a tree data structure comprising a record type for holding information relating to an upper node, and includes resolution logic for providing an attribute for the record, and

wherein said second model program is to execute for the record, at least an addition operation, a deletion operation, and a search operation, and resolution logic for describing a setting in accordance with said predetermined specification by a record attribute, a record state, or a combination of the record attribute and the record state is embedded in said second model program.

21. The storage medium according to claim 9, wherein said first model program prescribes a hierarchy type data structure including one record type which is a root and a record type in each level for holding information relating to a parent node, and includes resolution logic for providing an attribute for each record included in the hierarchy type data structure, and

wherein said second model program is to execute for each record, at least an addition operation, a deletion operation, and a search operation, and resolution logic for describing a setting in accordance with said



predetermined specification by the record attribute, the record state, or a combination of the record attribute and the record states is embedded in said second model program.

09767897 012401